

Faculty of pharmacy

Department Of Pharmaceutical

2nd semester 1st section

Assay of Glycodal[®] tablets containing Glycine and Calcium

Glycodal[®] each tablet contain

Glycine 180mg

Calcium Carbonate 420 mg

1* Assay of Glycine:

Procedure

20 ml sample (with bulb) + 5ml formalin solution (with cylinder) + 5 drops phenol phthalin (indicator)

Color of solution in the conical flask

"Colorless"

Titration against N/20 NaOH

At End Point

Color of solution in the conical

"Pink" 1st pink stable for 30 seconds

$$\text{Conc.} = \text{f.p} \times \text{Eq.} \times 100/20 \times 1000$$

$$\text{Eq.} = \frac{M_{\text{wt}}}{n \times 1000 \times 1/n}$$

Where; (n) is no. of reacted mole (here equals 1, i.e. 1 mole Glycine reacts with 1 mole NaOH)

$1/n$ (n = 1/20) $\rightarrow$ (n/20 NaOH)

M_{wt} for Glycine 75.07

$$\text{Recovery} = \text{found/labeled (180 mg) \%}$$

2* Assay of Calcium Carbonate:



- Basic buffer is used to prevent the reversibility of the reaction
- Ca^{+2} forms a complex with the indicator which affects the end point -vely
- A known amount of MgSO_4 solution is used as Mg^{+2} forms stable complex with the indicator than Ca^{+2}
- EBT when it is free its color is blue and when it combines with metal its color turns to wine red

Procedure

20 ml sample (with bulb) + 10 ml buffer solution (with cylinder) + 5ml MgSO_4 (with bulb) + 2 drops EBT (indicator)

Color of solution in the conical flask
(Wine red color)

Titration against N/20 EDTA

Color change into violet then drop wise till stable blue color.

$$\text{Conc.} = [\text{E.P.} - \text{blank}] \times \text{Eq.} \times 100/20 \times 1000$$

Where; blank is calculated and found to be 4.9

M_{wt} for CaCO_3 100.01

(n in equivalent) here equals 1, as 1 mole Ca^{+2} reacts with 1 mole EDTA

(1/n) N equals 1/20 (N/20 EDTA)

$$\text{Recovery} = \text{found/labeled (420 mg)} \%$$

Accepted range: 90 – 110%

**Assay of Lasix[®] ampoules containing furosemide 20 mg
by spectrophotometer**

***Procedure:**

- 2 ml sample (ampoule) is added to 100 ml volumetric flask and complete to 100 ml
- Take 5 ml of the previous solution in another 100 ml volumetric flask and complete to ml with N/10 NaOH
- From the equation :
 - $\text{Conc.} = \lambda/a \times 1000 \times \underline{100/5} \rightarrow (\text{dilution factor})$

Recovery = found/labeled (20 mg) %

Accepted range: 90 - 110%

